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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,532	11/29/2001	SHAWN R. GETTEMY	PALM-3698	5478

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EXAMINER

RAO, SHRINIVAS H

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/997,532

Applicant(s)

GETTEMY, SHAWN R.

Examiner

Steven H. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14-23 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,3-12,14-23 and 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date same.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 09/01/2006 has been entered, to the extent indicated below.

Currently the earliest available filing date is the U.S. filing date namely November 29, 2001.

Further claims 1, 12 and 23 as amended by the amendment to the extent entered and claims 3-11, 14- 22, 25-32 as previously recited are currently pending in the Application.

Claims 2, 13 and 24 were cancelled.

### ***Information Disclosure Statement***

To date no IDS has been filed in this application.

### ***Claim Objections***

Claims 1, 3 –12, 14-22 and 25-32 are objected to because of the following informalities:  
, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the

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application was filed, had possession of the claimed invention. All pending independent claims 1, 11 and 23 have been presently amended to include ( the reflective display having ) "a body "

However the specification as originally filed does not specifically describe a body and further the drawings including fig.4a , while indicating a parenthesis for 430 this is neither describes a body nor can be reasonably convey to one skilled in the art by the parenthesis a body, therefore all independent claims 1, 11 and 23 and dependent claims there form are objected to as failing to comply with the written description requirement. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-3, 5-14 and 16-25 and 27-32 are rejected under 35 U.S.C. 103(a) as being obvious over Mamiya et al. ( U.S. Patent No. 5,764,322, herein after Mamiya) in view of Kubo et al. (U.S. Patent No. 6,456,279 herein after Kubo) . ( for response to Applicants' arguments- see section below).

With respect to claims 1 and 12 Mamiya describe, a back light device ( Mamiya fig. 14, etc., col. 8 lines 20-25) a reflective display disposed above said backlight device, comprising ( a body –not entered –new matter –see above) a top surface and bottom surface ( Mamiya fig. 14 # 108).

Mamiya does not specifically describe an embedded light guide which is embedded ( in said body- not entered ) of said reflective display between said top surface and said bottom surface which conducts light from said backlight device to an area in front of said top surface of said reflective display.

However Kubo in figure 4 and col. 8 lines 65 to col. 9 line 20 describes an embedded light guide ( Kubo named light guide plate 2 and figure 11 between describes an embedded light guide ( Kubo named light guide plate 2 in fig. 4 and 1E to 1K between 1A and 1B, col.12 line 54 to col.15 line 55- 4th embodiment) which is embedded in the reflective display (Kubo named 6-fig.4, 1a to B –fig. 11 , etc. ) between said top surface and said bottom surface (Kubo 2 between 6 and bottom surface of 2-fig.4, all elements between 1A and 1B fig.11 ) through said reflective display which conducts light from said backlight device to an area in front of said top surface of said reflective display which is embedded in the reflective display (Kubo named 6) between said top surface and said bottom surface ( kubo 2 between 6 and bottom surface of 2)

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through said reflective display which conducts light from said backlight device to an area in front of said top surface of said reflective display (Similar to Applicants' figure 4a having light guides ( 433) in 430. ) so that an image of good visibility which has high luminance and is uniform over its entire reflective display area can be obtained even in an environment in which the external light is luminsumcient.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Kubo's embedded light guide extending through said reflective display which conducts light from said backlight device to an area above said reflective display in Mamiya's device so that an image of good visibility which has high luminance and is uniform over its entire reflective display area can be obtained even in an environment in which the external light is insufficient. ( Kubo col. 6 lines 5-10).

The remaining limitations of claims 1,12 : a front light reflecting film disposed above said top surface reflective surface of said reflective display (Mamiya figure 14, #116 front light reflecting film is transparent Mamiya co1.2 lines 52-55).

With respect to claims 3 and 14 describe the display assembly of Claim 1, wherein said backlight device is an electro-luminescent (EL) light device. ( col. 10 lines 45-46).

With respect to claims 5 and 14 describe the display assembly of Claim 1, wherein said backlight device is a cold cathode fluorescent tube (CCFT) light device. ( col. 10 lines 45-46).

With respect to claims 6 and 17 describe the display assembly of Claim 1, further comprising a brightness enhancing film (BEF) disposed between said backlight device

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and said bottom surface of said reflective display and for directing light toward said light guide. ( Col. 9 lines 10-39).

With respect to claims 7,8, 29, 18, 19,30 and 31 describes the display assembly of Claim 1, wherein said reflective display is an electronic ink display and an electronic paper display. The limitations the reflective display is used as a electronic ink display and electronic paper display, these limitations recite the manner in which the claimed apparatus is intended to be employed. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). With respect to claim 10 describes the display assembly of Claim 1, wherein said light guide comprises a plurality of said light guides which enclose an area of said reflective display. ( col. 7 lines 21-25).

With respect to claim 11 describes the display assembly of Claim 10, wherein said plurality of said light guides enclose a sub-pixel of said reflective display. (Mamiya Figure 14, col. 7 lines 35-40, col. 10 line 35).

With respect to claim 21 describes the display assembly of Claim 1, wherein said light guide comprises a plurality of said light guides which enclose an area of said reflective display. ( Mamiya col.1 lines 50-55).

With respect to claim 22 describes the display assembly Claim 12, wherein said plurality of said light guides enclose a sub-pixel of said reflective display. ( Mamiya Figure 14, col. 7 lines 35-40).

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With respect to claim 23 Mamiya describes a display assembly for an electronic device comprising : a backlight device, a reflective display disposed above said backlight device and comprising ( a body- not entered) a top surface and a bottom surface, 4e within said reflective display and enclosing a display area within said reflective display, wherein said light guides conduct light from said backlight device to an area above said reflective display, wherein the light is reflected on to said reflective display. (Kubo figure 4). a front light reflecting film disposed above said top surface of said reflective display ( rejected for reasons stated under claims 1 ,1 2 etc.).

With respect to claim 25 Mamiya describes the display assembly of Claim 23, wherein said backlight device is an electro-luminescent (EL) light device. ( Hirakata col.3 lines 1 7-20, etc).

With respect to claim 27 Mamiya describes the display assembly of Claim 23, wherein said backlight device is a cold cathode fluorescent tube (CCFT) light device. (col. 10 lines 45-46).

With respect to claim 28 describes the display assembly of Claim 23, further comprising a brightness enhancing film (BEF) disposed above said backlight device and below said reflective display for directing fight toward said plurality of light guides. ( Col. 9 lines 10-39).

With respect to claim 32 describes the display assembly of Claim 23, wherein said plurality of light guides enclose a sub-pixel area of said reflective display. ( Mamiya Figure 14, col. 7 lines 35-40).



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B. Claims 4, 15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamiya et al ( U.S. Patent No. 5,764,322, herein after Mamiya) in view of Kubo ( U.S. Patent No. 6,456,279, herein after Kubo) as applied to claims 1-3, etc. above and further in view of Hirakata et al. ( U.S. Patent No. 6,191 , 833 herein after Hirakata).

With respect to claim 4 Mamiya describes the display assembly of Claim 1. Mamiya does not specifically describe the backlight device contains at least one light emitting diode (LED). However, Hirakata in col. 3 lines 17 to 20 describes the back light can be a Led or fluorescent tube to save valuable real estate, provide a light source with longer life and also a device that does not generate as much heat thereby eliminating the need for heat removing devices like heat sink etc.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Hirakata's Led for Mamiya's fluorescent tube in Mamiya's device to save valuable real estate, provide a light source with longer life and also a device that does not generate as much heat thereby eliminating the need for heat removing devices like heat sink etc.

With respect to claim 15 describes the display assembly of Claim 12, wherein said backlight device contains at least one light emitting diode (LED). ( Hirakata col.3 lines 17-20, etc).

With respect to claim 26. The display assembly of Claim 23, wherein said backlight device contains a brightness enhancing film at least one light emitting diode (LED). ( Hirakata co1.3 lines 17-20, etc).

## Response to Arguments

Applicant's arguments ( that are repeated and also stated in the previous response) filed on February 15, 2006 have been fully considered but they are not persuasive for reasons set out previously and incorporated here by reference for the sake of brevity9 A body – not entered and not given patentable weight) .

Applicants' contend that Mamiya alone or in combination with Kubo does not disclose or suggest a reflective display comprising a top surface and a bottom surface ( inherent that reflective display to have a top and bottom surface in order to have thickness) and an embedded light guide which is embedded in said reflective display between said top surface and bottom surface is described by applied art as shown above. Rest of Applicants' arguments essentially repeat the above arguments and are not found persuasive. Therefore all of applicants' arguments are found to be not persuasive and all pending claims are finally rejected.

Applicants' contention that Kubo fails to teach, motivate or suggest an embedded light guide which is embedded in the body of the reflective display between said top surface and said bottom surface is not persuasive because as stated in the rejection above Kubo in figure 4 and col. 8 lines 65 to col. 9 line 20 and figure 11 between describes an embedded light guide ( Kubo named light guide plate 2 in fig. 4 and 1E to 1K between 1A and 1B, col.12 line 54 to col.15 line 55- 4th embodiment) which is embedded in the reflective display (Kubo named 6-fig.4, 1a to B –fig. 11 , etc. ) between said top surface and said bottom surface (Kubo 2 between 6 and bottom surface of 2-fig.4, all elements between 1A and 1B fig.11 ) through said reflective display which

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conducts light from said backlight device to an area in front of said top surface of said reflective display .

Similar to Applicants' figure 4a having light guides ( 433) in 430.

The motivation to combine Kubo with Mamiya is so that an image of good visibility which has high luminance and is uniform over its entire reflective display area can be obtained even in an environment in which the external light is luminsumcient. ( also stated in the rejection above).

Applicants' next contention " that element 116 of Figure 114 of Mamiya does not correspond to the front light reflecting film disposed above the top surface of the reflective display, as in the invention of Independent Claims is also not persuasive because Mamiya's element is 116 is similar to Applicants' front light reflecting film 440 ( see Applicants' specification page 15 lines 4 to 10, etc. describe front light reflecting film 440 " as a front light reflecting film 440 which has the characteristics of a dual brightness enhancement film (DBEF). DBEF layers are used to recycle light in display devices by, for example, reflecting light which does not pass through a polarizing layer. In one embodiment of the present invention, front light reflecting film 440 has reflective pyramid shaped microstructures 441 which reflect light that is conducted by light guide spacers 433 back down onto reflective display 430. However, front light reflecting film 440 is sufficiently transparent..." Mamiya element 116 has the same characteristics( as Applicants' element 440) of a dual brightness enhancement film (DBEF). DBEF layers are used to recycle light in display devices by . therefore Applicants' this contention is also not persuasive.

Dependent claims were alleged to allowable because of their dependency upon allegedly allowable independent claims .

However as seen above independent claims are not allowable. Therefore dependent claims are also not allowable.

Applicants' arguments with respect to claims 12 and 23 and the corresponding dependent claims are the same as above and not found persuasive for reasons set forth above.

It is noted that Hirakata the third applied reference need not repeat the teachings ( namely embedded light guide which is embedded in the body of the reflective display between the top surface and the bottom surface of the reflective display and a front light reflecting film disposed above the top surface of the reflective display) that is shown to be taught by the other applied primary and secondary reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is ( 571)272-1718. The examiner can normally be reached on 8.00 to 5.00. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system,

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contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*ML*  
*4/07/2016*